

**SAMPLING AND ANALYSIS PLAN
FOR
TATOOINE INDUSTRIES ASSESSMENT
BURNS, LARAMIE COUNTY, WYOMING**

Prepared for
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 8

Prepared by
WESTON SOLUTIONS, INC.
Region 8 Superfund Technical Assessment and Response Team

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09/27/2016
Document Revision Date
N/A

For approval signatures, see Worksheet 1 & 2.

Project Dates of Sampling:	10/3/2016
Site Spill Identifier No.:	A8N7
Contract Name:	START IV
Contract No.:	EP-S8-13-01
Technical Direction Document No.:	0001/1606-19
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SAP Revision Log

Site: Tatooine Industries Assessment

OSC: Joyce Ackerman

TDD: 0001/1606-19

Date	Revision Number	Reason for Change of Scope/Procedures	SAP Section Superseded	Requested By	Approved By

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List of Acronyms

°F	degrees Fahrenheit
ANSI	American National Standards Institute
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CERLIS	Comprehensive Environmental Response, Compensation, and Liability System
CLP	Contract Laboratory Program
CO	Contracting Officer
COC	Chain-of-Custody
COR	Contracting Officer Representative
CRL	Central Regional Laboratory
CRQL	Contract Required Quantitation Limits
DQO	Data Quality Objective
EDD	electronic data deliverable
ERT	Environmental Response Team
HASP	Health and Safety Plan
HRS	Hazard Ranking System
IDW	investigation-derived waste
MS	matrix spike
MSD	matrix spike duplicate
NA	not applicable
NRC	National Response Center
PAL	Project Action Limit
PID	Photoionization Detector
PM	Project Manager
PQL	Project Quantitation Limit
PPE	Personal Protective Equipment
PT	proficiency testing
PTL	Project Team Lead
QA	quality assurance
QAPP	Quality Assurance Project Plan
QC	quality control
RAS	Routine Analytical Services
SAP	Sampling and Analysis Plan
SAS	Special Analytical Services
SOP	Standard Operating Procedure
START IV	Superfund Technical Assessment and Response Team 4
TAL	Target Analyte List
TBD	to-be-determined
TCL	Target Compound List
TDD	Technical Direction Document
UFP-QAPP	Uniform Federal Policy--Quality Assurance Project Plan
U.S. EPA	United States Environmental Protection Agency
VOA	Volatile Organic Analysis
VOC	Volatile Organic Compounds

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List of Acronyms

WAM	Work Assignment Manager
WESTON	Weston Solutions, Inc.

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Attachment C	Data Management Plan

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Introduction

This SAP identifies the data collection activities and associated QA/QC measures specific to the Tatooine Industries Assessment (the Site) located in Burns, Laramie County, Wyoming. All data will be generated in accordance with the quality requirements described in the Quality Assurance Project Plan for Region 8 CERCLA Removal and Emergency Response Activities in Colorado, Utah, Wyoming, Montana, North Dakota, and South Dakota (Weston 2013). The purpose of this SAP is to describe site-specific tasks that will be performed in support of the stated objectives. This SAP will reference the QAPP for generic tasks common to all data collection activities including routine procedures for sampling and analysis, sample documentation, equipment decontamination, sample handling, data management, assessment, and data review. Additional site-specific procedures and/or modifications to procedures described in the QAPP are described in the following SAP elements.

This SAP is prepared, reviewed, and approved in accordance with the procedures detailed in the QAPP. Any deviations or modifications to the approved SAP will be documented using the SAP Revision Form. This SAP is produced in accordance with the UFP for QAPPs and consists of the site-specific UFP Worksheets from the QAPP.

Project Organization and Team

Refer to the QAPP Worksheet 3 & 5, and 4, 7, & 8 for the program organizational chart, communication pathways, personnel responsibilities and qualifications, and special personnel training requirements. Project-specific information is provided below.

The following are key individuals identified for this project:

Name	Title/Role	Organization	Receive Copy of SAP?
Eric Sandusky	Project Team Lead	Weston	Yes
Robert Reed	Project Manager	Weston	Yes
Joe Rudi	Scientist	Weston	No
Joyce Ackerman	OSC	EPA	Yes

The individuals who will receive a copy of the Program QAPP are specified on QAPP Worksheet 3 & 5 (Project Organization and QAPP Distribution) as noted by the asterisk symbol adjacent to their names. The program QA Manager (QAPP Worksheet 4, 7 & 8) and the Project Manager will maintain the approved QA project plan consisting of the Program QAPP, Project SAP and SAP Document Review Crosswalk. The PTL will distribute the most current copy of the project QA documents via electronic or hard copy, as directed by the OSC. Files for this project will be kept in accordance with Section H.20 of Contract No.: EP-S8-13-01, stating a length of 10 years from close of the project or end of litigation.

QAPP Reference

Weston Solutions, Inc. 2013. Quality Assurance Project Plan for Region 8 CERCLA Removal and Emergency Response Activities in Colorado, Utah, Wyoming, Montana, North Dakota, and South Dakota. Prepared for the START IV Contract. July 2013.

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Worksheet 1 & 2 — Title and Approval Page

(UFP-QAPP Manual Section 2.1)
(EPA 2106-G-05 Section 2.2.1)

1. Project Identifying Information

- a) **Site Name/Project Name:** Tatooine Industries Assessment
- b) **Site Location/Number:** Burns, Laramie County, Wyoming
- c) **Contract/Work Assignment Number:** EP-S8-13-01 / 0001/1606-19

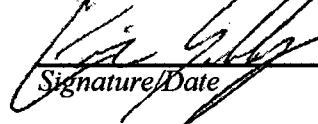
2) List Plans and reports from previous investigation relevant to this project.

The undersigned approves the entire UFP-QAPP document which includes this SAP and other elements that are found in the Region 8 Removal and Emergency Response QAPP (Revision 1.0).

**Lead Investigative Organization's SAP Author:
/ Project Team Leader**

Eric Sandusky/ Project Team lead

Printed Name/Title



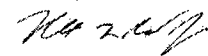
9/27/2016

Signature/Date

**Lead Investigative Organization's Project
Manager:**

Robert Reed/ WESTON

Printed Name/Title



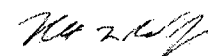
09/29/2016

Signature/Date

**Lead Investigative Organization's Technical
Manager:**

Robert Reed/ WESTON

Printed Name/Title



09/29/2016

Signature/Date

Federal Regulatory Agency OSC/Team Leader

Joyce Ackerman/ OSC

Printed Name/Title

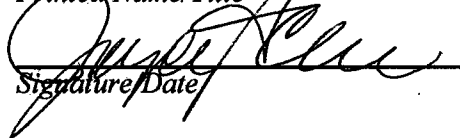


Signature/Date

**Federal Regulatory Agency/ Delegated
Approval Officer:**

Joyce Ackerman/ OSC

Printed Name/Title



Signature/Date

Document Control Numbering System:

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Worksheet 9 — Project Planning Session Summary

(UFP-QAPP Manual Section 2.5.1 and Figures 9-12)

(EPA 2106-G-05 Section 2.2.5)

Date of Planning Session: 9/21/2016				
Location: Conference call				
Purpose: Site discussion				
Name	Title/Role	Organization	Phone No.	E-mail Address
Joyce Ackerman	OSC	EPA	303-312-6822	Ackerman.Joyce@epa.gov
Joel Frost		Wyoming DEQ		Joel.Frost@wyo.gov
Eric Sandusky	Associate Geoscientist/ PTL	WESTON	303-729-6132	Eric.Sandusky@westonsolutions.com

Notes/Comments: Discussion of time critical activities: Level B PPE drum sampling, lab analysis, schedule for field activities, assessment of grounds to determine amount of hazardous material.

Consensus Decisions Made:

- START will mobilize to the site with level B PPE, and sampling equipment, to perform the site assessment. START will prepare a HASP.

Action Items:

Action	Responsible Party	Due Date
Develop Health and Safety Plan	Weston	10/3/2016
Develop Equipment List	Weston	9/26/2016
Develop SAP	Weston	10/3/2016

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Worksheet 10 — Conceptual Site Model

(UFP-QAPP Manual Section 2.5.2)

(EPA 2106-G-05 Section 2.2.5)

- **Problem Definition:**
The Site is located north of the I-80 access road approximately 26 miles east of Cheyenne, WY. The surrounding properties are undeveloped agricultural and grazing fields. The warehouse has been abandoned for a number of years, and is known to be occupied by vagrants. The Laramie County Sheriff will be on site as security when activities are ongoing.
- **Background Information/Site History:**
The Site (N 41.157761, W -104.446838) is located at 4390 I-80 Service Rd., Burns, Laramie County, WY. The area surrounding the site on the north side of I-80 is primarily agricultural property (Figure 1). The warehouse was historically a helicopter maintenance facility, before becoming an electronic recycling facility. The site has been unsecure, and vagrants have broken windows and doors around the property.

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Worksheet 11 — Project/Data Quality Objectives

(UFP-QAPP Manual Section 2.6.1)

(EPA 2106-G-05 Section 2.2.6)

1. State the Problem

10-20 drums of unknown materials are located on site. An unknown volume of PCB ballasts, CRT televisions, smoke detectors, and other chemicals are on site.

2. Identify the Goals of the Study

START will document site activities, perform sampling of the drums, and document the amount of leaded glass in the debris piles. Drum samples will be collected and analyzed for PCBs, asbestos, and TCLP (metals, VOC, SVOC).

3. Identify Information Inputs

Information inputs will be received from sampling results. All sampling results will be imported and published in SCRIBE.

4. Define the Boundaries of the Study

The Site is located at 4390 I-80 Service Rd., Burns, Laramie County, WY. Work will take place on the Site.

5. Develop the Analytic Approach

Samples will be collected from the drums which contain material

6. Specify Performance or Acceptance Criteria

Sample results will be compared to laboratory method detection limits to determine presence/absence.

7. Develop the Detailed Plan for Obtaining Data

Sampling data will be collected per the sampling design and rationale provided in Worksheet 17. Sampling location nomenclature is described in Worksheet 17. Data will be entered into Scribe for data management and reporting purposes.

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Worksheet 14 & 16 —Project Tasks & Schedule

(UFP-QAPP Manual Section 2.8.2)

(EPA 2106-G-05 Section 2.2.4)

Activity	Responsible Party	Planned Start Date	Planned Completion Date	Deliverable(s)	Deliverable Due Date
Develop a Draft SAP and the EPA Region 8 QA Document Review Crosswalk	WESTON	9/26/2016	9/30/2016	Draft SAP and the Draft EPA Region 8 QA Document Review Crosswalk	9/30/2016
Address EPA comments on Draft SAP and the Draft EPA Region 8 QA Document Review Crosswalk	WESTON	TBD	One week after comment are received	SAP and the Final EPA Region 8 QA Document Review Crosswalk	TBD
Develop HASP	WESTON	8/26/2016	8/26/2016	HASP	N/A
Mobilization/Demobilization	WESTON	10/3/2016	10/3/2016	Field Notes	N/A
Sample Collection Tasks	WESTON	N/A	N/A	Field Notes	N/A
Analytical Tasks	WESTON	10/4/2016	10/11/2016	Field Notes/Laboratory Reports	10/12/2016
Quality Control Tasks	WESTON	N/A	N/A	Report of Analyses/Data Package	N/A
Validation	WESTON	N/A	N/A	Validation Summary Report	N/A

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Worksheet 14 & 16 —Project Tasks & Schedule

(UFP-QAPP Manual Section 2.8.2)

(EPA 2106-G-05 Section 2.2.4)

Activity	Responsible Party	Planned Start Date	Planned Completion Date	Deliverable(s)	Deliverable Due Date
Summarize Data	WESTON	TBD	TBD	Data Report	TBD
Develop Report	WESTON	TBD	TBD	Draft Report	TBD
Address EPA comments on Draft Report	WESTON	TBD	TBD	Final Report	TBD

Reports to management will be written and distributed in accordance with the QAPP Worksheet #6.

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Worksheet 15 — Project Action Limits and Laboratory-Specific Detection/Quantitation Limits

(UFP-QAPP Manual Sections 2.6.2.3 and Figure 15)

(EPA 2106-G-05 Section 2.2.6)

The following information will be provided for each matrix, analyte, analytical method, and concentration level (if applicable).

Matrix: Liquids and solids

Analytical Method: Various

Concentration level (if applicable): N/A

Analyte ¹	PAL ²	PAL Reference ²	PQL Goal	Laboratory Quantitation Limit ³	Laboratory Detection Limit ³
PCBs	N/A	N/A	N/A	N/A	N/A
Flashpoint	N/A	N/A	N/A	N/A	N/A
pH	N/A	N/A	N/A	N/A	N/A
Metals (TCLP)	N/A	N/A	N/A	N/A	N/A
VOCs (TCLP)	N/A	N/A	N/A	N/A	N/A
SVOCs (TCLP)	N/A	N/A	N/A	N/A	N/A
Asbestos	N/A	N/A	N/A	N/A	N/A

¹ CLP laboratories use accepted analytical methods for the isolation, detection, and quantitation of specific target compounds and analytes. The CLP TCL, TAL, and their corresponding CRQL are listed in QAPP Appendix B and QAPP Appendix C, respectively.

² Links to State regulatory cleanup standards are provided in QAPP Appendix D.

³ Terminology is project/laboratory-specific.

Worksheet 17 — Sampling Design and Rationale

(UFP-QAPP Manual Section 3.1.1)

(EPA 2106-G-05 Section 2.3.1)

Samples will be managed in accordance with SAP Worksheet 26 & 27.

Sample Collection

Samples will be collected directly into sampling containers. Samples will be documented in a logbook.

Sample Identification and Handling

Samples will be analyzed for the parameters listed in SAP Table 1. Requirements for the sample container, volume, preservation, and QC samples are included in Table 1.

Sampling nomenclature will be:

[] - [] - [] - []

1

2

3

4

Component 1 = Defines the Project:

TI = Tatooine Industries

Component 2 – Indicates the drum number

01 = First Drum

08 = Eighth Drum

Component 4— Indicates the date

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Worksheet 17 — Sampling Design and Rationale

(UFP-QAPP Manual Section 3.1.1)

(EPA 2106-G-05 Section 2.3.1)

YYYYMMDD

Sampling Logistics and Contingencies

- *Site Location and Weather Considerations*

The site consists of approximately 8 acres, including two warehouses. Severely inclement weather could delay sampling.

- *Sampling Schedule Considerations*

Sampling will take place on October 3 and 4, 2016.

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Worksheet 18 — Sampling Locations and Methods

(UFP-QAPP Manual Section 3.1.1 and 3.1.2)

(EPA 2106-G-05 Sections 2.3.1 and 2.3.2)

Sampling Location / ID	Matrix	Depth (inches)	Type	Analyte/Analytical Group	Sampling SOP Reference ¹	Comments
TI-XX-201610XX	unknown	N/A	N/A	Asbestos, metals, VOCs, SVOCs, Flashpoint, pH, PCBs	2013	N/A

¹ Sampling SOPs references will be provided in Worksheet 21.

Worksheet 19 & 30 — Sample Containers, Preservation, and Hold Times

(UFP-QAPP Manual Section 3.1.2.2)

(EPA 2106-G-05 Section 2.3.2)

Matrix	Analyte/ Analyte Group	Method/ SOP ¹	Accreditation Expiration Date	Container(s) (number, size & type per sample) ²	Preservation	Preparation Holding Time	Analytical Holding Time	Data Package Turnaround
Liquid	Flashpoint		TBD					5 days
Liquid	pH		TBD					5 days
Solid	Asbestos		TBD					5 days
Liquid	PCBs		TBD					5 days
Liquid	Metals		TBD					5 days
Liquid	VOCs		TBD					5 days
Liquid	SVOCs		TBD					5 days

¹ Refer to the Analytical SOP References table (Worksheet 23).

² The minimum sample size is based on analysis allowing for sufficient sample for reanalysis. Additional volume is needed for the laboratory MS/MSD sample analysis.

³ Refers to requirements after processing of aquatic animal tissue by laboratory.

Worksheet 20 — Field Quality Control Sample Summary

(UFP-QAPP Manual Sections 3.1.1 and 3.1.2)

(EPA 2106-G-05 Section 2.3.5)

Matrix	Analyte/Analytical Group	No. of Field Samples ¹	No. of Field Duplicates	No. of MS/MSD	No. of Field Blanks	No. of Equip. Blanks	No. of Trip Blanks	No. of Other	Total No. of Samples to Laboratory
Liquid	metals, VOCs, SVOCs, Flashpoint, pH, PCBs	TBD	1 per 10	1 per 20	TBD	TBD	TBD	TBD	TBD
Solid	Asbestos	TBD	1 per 10	1 per 20	TBD	TBD	TBD	TBD	TBD

¹ Samples that are collected at different depths at the same location, and analyzed separately, will be counted as separate field samples. Even if they are taken from the same container as the parent field sample, MS/MSDs are counted separately, because they are analyzed separately. If composite samples or incremental samples are collected, only the sample that will be analyzed will be included; subsamples and increments will not be listed separately.

The number and types of QC samples will be based on project-specific DQOs, and this worksheet will be adapted as necessary to accommodate project-specific requirements. Project-specific QC samples may include field duplicate, field blank, equipment blank, trip blank, field split, MS/MSD, and PT samples. Samples will be collected in accordance with the frequencies recorded on QAPP Worksheet 12.

Quality Assurance Assessment and Corrective Actions are found in QAPP Worksheet #28.

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Worksheet 21 — Field SOPs

(UFP-QAPP Manual Section 3.1.2)

(EPA 2106-G-05 Section 2.3.2)

SOP Number or Reference	Title, Revision, Date, and URL (if available)	Originating Organization	SOP Option or Equipment Type (if SOP provides different options)	Modified for Project? Y/N	Comments
2001	General Field Sampling Guidelines, 6/2011	U.S. EPA, ERT	N/A	N	SOPs are available in QAPP Appendix I

Investigation Derived Waste

During sampling activities, Investigation Derived Waste (IDW) may be generated. IDW may consist of decontamination fluids, excess sampled media (e.g., soil, sediment, water, etc.), disposable sampling supplies, and PPE (e.g., Tyvek/Saranex coveralls, gloves, booties, etc.). Handling of IDW will be performed according with SOP 2049 as listed above as well as procedures described in *Management of Investigation Derived Wastes during Site Inspections (May 1991)*(QAPP Appendix S). Waste disposal for IDW will be dependent upon classification of the waste as either RCRA hazardous or RCRA nonhazardous waste.

Decontamination

General decontamination procedures are described in EPA ERT SOP #2006 Sampling Equipment Decontamination.

It is anticipated that START sample collection will exclusively use dedicated/ disposable sampling tools. If reusable sampling equipment is used, decontamination will consist of initial brushing to remove gross particulate, a rinse withalconox, followed by a distilled water rinse.

WESTON will review existing information and may conduct sampling for removal/emergency response activities. Environmental samples will be collected for RAS through the CLP, SAS analysis at the EPA Region 8 CRL, or by WESTON-subcontracted laboratories. CLP-collected environmental samples will adhere to the procedures described in the *EPA Contract Laboratory Program Guidance for Field Samplers (January 2011)* (QAPP Appendix E).

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Worksheet 22 — Field Equipment Calibration, Maintenance, Testing, and Inspection

(UFP-QAPP Manual Section 3.1.2.4)

(EPA 2106-G-05 Section 2.3.6)

Field Equipment	Calibration Activity	Maintenance Activity	Testing Activity	Inspection Activity	Frequency	Acceptance Criteria	Corrective Action	Title or Position of Responsible Person	Verification	SOP Reference ¹
PID and/or FID	Calibrate with span gas, as recommended by manufacturer	Check battery	Calibration check	Visually inspect equipment	Refer to instrument SOP	Refer to instrument SOP	Refer to instrument SOP	Field personnel	OSC	G-15/ MultiRae/ TVA - 1000
Mercury analyzer	Calibrate as recommended by manufacturer	Check battery	Calibration check	Visually inspect equipment	Refer to instrument SOP	Refer to instrument SOP	Refer to instrument SOP	Field personnel	OSC	Ohio Lumex

¹ Refer to Field SOPs (Worksheet 21) and Analytical SOPs (Worksheet 23).

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Worksheet 23 — Analytical SOPs

(UFP-QAPP Manual Section 3.2.1)

(EPA 2106-G-05 Section 2.3.4)

Lab SOP Number ¹	Title, Revision Date, and/or Number and URL (if available)	Screening or Definitive Data	Matrix/Analytical Group	SOP Option or Equipment Type	Modified for Project? (Y/N)
TBD	TBD	TBD	TBD	TBD	N

Worksheet 24 — Analytical Instrument Calibration

(UFP-QAPP Manual Section 3.2.2)

(EPA 2106-G-05 Section 2.3.6)

As stated in Worksheet 22, WESTON field personnel are responsible for the calibration of WESTON and sub-contractor provided analytical field equipment. Documented and approved procedures will be used for calibrating measuring and testing equipment. Widely accepted procedures, such as those published by U.S. EPA and ASTM, or procedures provided by manufacturers in equipment manuals will be adopted.

The responsibility for the calibration of laboratory equipment rests with the selected laboratories. Each type of instrumentation and each U.S. EPA-approved method have specific requirements for the calibration procedures, depending on the analytes of interest and the sample medium. The calibration procedures and frequencies of the equipment used to perform the analyses will be in accordance with requirements established by the U.S. EPA. The laboratory QA manager will be responsible for ensuring that the laboratory instrumentation is maintained in accordance with specifications. Individual laboratory SOPs will be followed for corrective actions and preventative maintenance frequencies. Laboratory quality control, calibration procedures, corrective action procedures, and instrument preventative maintenance will be included in an addendum to this QAPP once the laboratories have been selected for each of the TBA sites. Items may include, but are not limited to those identified in the table below.

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Worksheet 24 — Analytical Instrument Calibration

(UFP-QAPP Manual Section 3.2.2)

(EPA 2106-G-05 Section 2.3.6)

Instrument	Calibration Procedure	Frequency of Calibration	Acceptance Criteria	Corrective Action	Title/Position Responsible for CA	SOP Reference ¹
TBD	TBD	TBD	TBD	TBD	TBD	TBD

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Worksheet 26 & 27 — Sample Handling, Custody, and Disposal

(UFP-QAPP Manual Section 3.3)

(EPA 2106-G-05 Manual Section 2.3.3)

Examples of field form (QAPP Appendix F), chain-of-custody (QAPP Appendix G), and sample label and custody seal (QAPP Appendix H) documentation are in the QAPP. SOPs for sample handling are identified below and are located in QAPP Appendix I.

Sampling Organization: WESTON

Laboratory: TBD

Method of sample delivery (shipper/carrier): TBD

Number of days from reporting until sample disposal: N/A

Activity	Organization and Title or Position of Person Responsible for the Activity	SOP Reference
Sample Labeling	START Field Personnel	QAPP Appendix I, SOP G-1 & G-3
Chain-of-Custody Form Completion	START Field Personnel	QAPP Appendix I, SOP G-8
Sample Packaging	START Field Personnel	QAPP Appendix I, SOP G-9
Shipping Coordination	START Field Personnel	QAPP, Appendix I, SOP G-9
Sample Receipt, Inspection, & Log-in	Laboratory Sample Custodian	Laboratory SOP
Sample Custody and Storage	Laboratory Sample Custodian /Laboratory Analytical Personnel	Laboratory SOP
Sample Disposal	START Field Personnel/Laboratory Sample Custodian /Laboratory Analytical Personnel	QAPP Appendix I, SOP G-1 & G-3 Laboratory SOP

Supplies and consumables can be received at a WESTON office, U.S. EPA Warehouse or at a site. When supplies are received at a WESTON office or U.S. EPA Warehouse, the PM or PTL will sort the supplies according to vendor, check packing slips against purchase orders, and inspect the condition of all supplies before the supplies are accepted for use on a project. If the supplies do not meet the acceptance criteria, deficiencies will be noted on the packing slip and purchase order. The item will then be returned to the vendor for replacement or repair. Procedures for receiving supplies and consumables in the field are similar to those described above. Upon receipt, items will be inspected by the WESTON PM or PTL against the acceptance criteria. Any deficiencies or problems will be noted in the field logbook, and deficient items will be returned for immediate replacement.

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Worksheet 36 — Data Validation Procedures

(UFP-QAPP Manual Section 5.2.2)

(EPA 2106-G-05 Section 2.5.1)

Data Validator: WESTON

Analytical Group/ Method	Data Deliverable Requirements	Analytical Specifications	MPC	Percent of Data Packages to be Validated	Percent of Raw Data Reviewed	Percent of Results to be Recalculated	Validation Procedure	Validation Code ¹	Electronic Validation Program/ Version
Asbestos, metals, VOCs, SVOCs, Flashpoint, pH, PCBs	Scribe EDD Stage 2A	TBD	Worksheets 11, 12, 19 & 30	100	0	0	U.S. EPA Stage 2A	S2AVE	N/A

¹ Validation Codes are provided in QAPP Appendix M.

Validation will be performed on all laboratory analytical data unless a defined quantity or percentage of samples is identified by the U.S. EPA in the Technical Direction Document or during the project scoping meeting on a project-specific basis. Project validation criteria as per QAPP Worksheets 12, 15, 19 & 30, 28, and 36, and cited EPA SW-846 methodology will be used. WESTON-contracted laboratory data packages will be verified and validated using a Stage 2A validation, as described in the EPA *Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use* (January 2009) (QAPP Appendix J) unless otherwise specified by the U.S. EPA WAM/COR during the development of the DQOs. Validation Qualifiers will be applied using the following hierarchy: Region 8 UFP-QAPP for Removal Actions and Emergency Responses; the site-specific SAP, and/or QAPP; *EPA National Functional Guidelines for Organic Data Review* (QAPP Appendix K); *EPA National Functional Guidelines for Inorganic Data Review* (QAPP Appendix L); EPA Publication SW-846; and the laboratory-specific SOP. Methods for which no data validation guidelines exist will be validated following the guidance deemed most appropriate by the data validator.

The data validator will receive all laboratory packages and analytical results electronically. Additionally, the validator will be required to submit final validation reports via PDF format and must provide an annotated laboratory analytical result EDD with applicable data validation qualifiers (QAPP Appendix M) identified in the site-specific SAP, and/or QAPP, and/or result value modifications. The Delegated QA Manager will use EPA document *Using Qualified Data to Document an Observed Release and Observed Contamination*

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Worksheet 36 — Data Validation Procedures

(UFP-QAPP Manual Section 5.2.2)

(EPA 2106-G-05 Section 2.5.1)

(July 1996) to aid in determining the use of qualified data to document all observed release and observed contamination by chemical analysis under U.S. EPA's HRS. Approved data will be released by the Delegated QA Manager for reporting.

QAPP Worksheet 35 describes the issue resolution process and the individual responsible for conveying results to data users. For issues internal to the laboratory, the laboratory PM will be the responsible party for data resolution issues and will be responsible for conveying this information to the Delegate QA Manager or delegated authority. For external laboratory data and quality issues, the Delegated QA Manager or delegated authority will provide issue resolution information and will be the responsible party for conveying this information to data users. For quality documents, reports, and field information, the Delegated QA Manager, delegated authority, or other persons identified in the table in QAPP Worksheet 35 will be responsible for issue resolutions of such items and will be the responsible party for conveying that information to data users.

W0388.1E.01104

TABLES

W0388.1E.01104

Table 1
Sampling and Analysis Summary

Site: Tatooine Industries Assessment
OSC: Joyce Ackerman
TDD: 0001/1606-19

Matrix	Analytical Parameter	Analytical Method	Containers (Numbers, Size, and Type)	Preservation Requirements	Number of Sampling Locations	Number of Field Duplicates	Number of MS/MSDs ²	Number of Blanks (Trip, Field, Equipment, Rinsate) ¹	Total Number of Samples to Lab ³	Holding Time
Liquid	Metals	8015	1 1 L HDPE	HNO ₃	TBD	TBD	TBD	TBD	TBD	14 days
	VOCs	8260	3 40 mL VOA	HCL	TBD	TBD	TBD	TBD	TBD	
	SVOCs	8270	2 1 L amber glass	N/A	TBD	TBD	TBD	TBD	TBD	
	Flashpoint	1010			TBD	TBD	TBD	TBD	TBD	
	pH	9040			TBD	TBD	TBD	TBD	TBD	
	PCBs	8082	2 1 L amber glass	N/A	TBD	TBD	TBD	TBD	TBD	
Solid	Asbestos	600	Quart size plastic bag	N/A	TBD	TBD	TBD	TBD	TBD	N/A

Notes:

¹ Trip blanks are only required for VOCs in water samples.

² For the samples designated for MS/MSDs, triple volume is required for VOCs and double volume for other water parameters.

³ Total number of samples to the laboratory does not include MS/MSD samples.

W0388.1E.01104

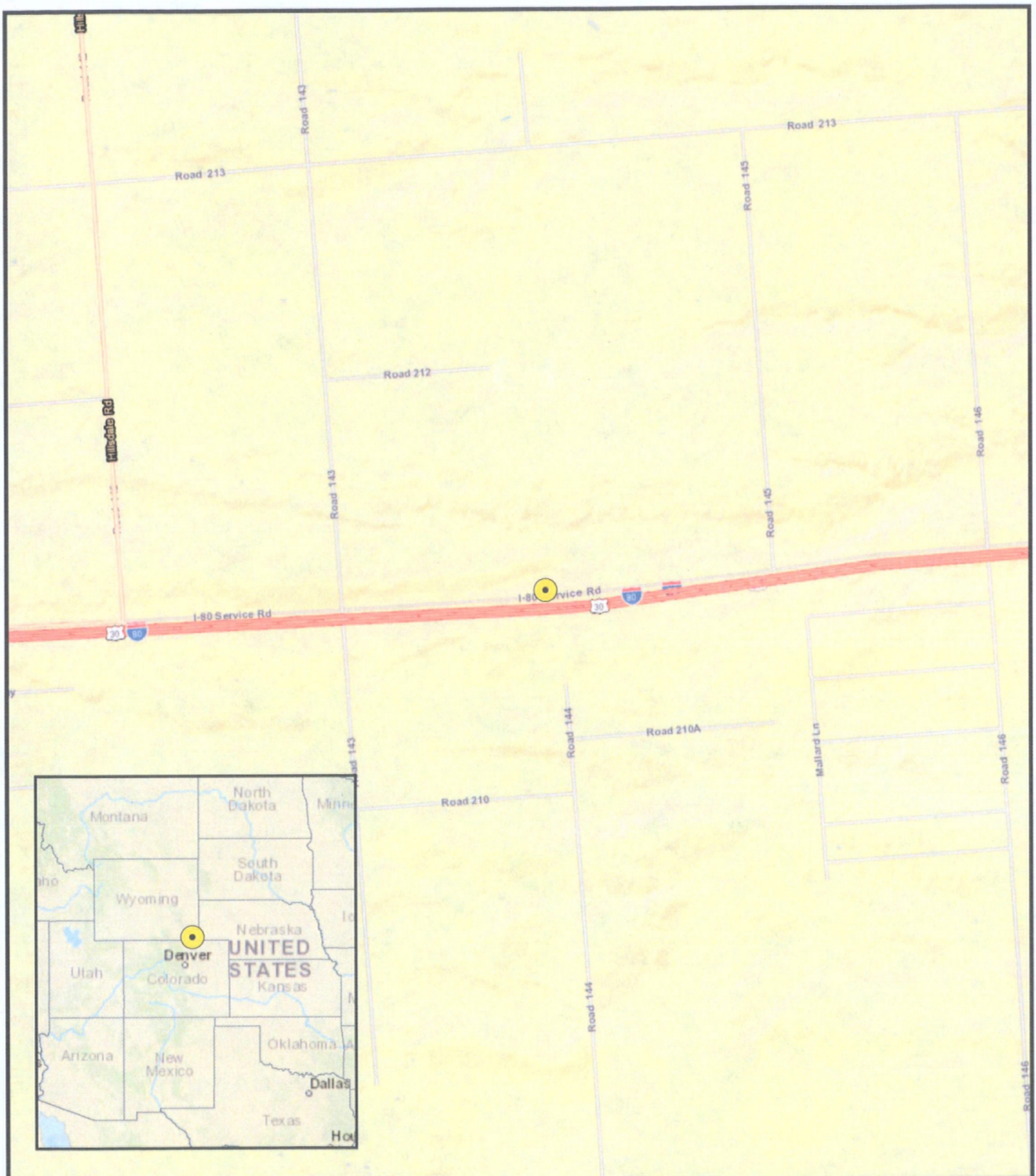
FIGURES

W0388.1E.01104

ATTACHMENTS

W0388.1E.01104

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Legend

 Site Location

0 0.2 0.4 0.8 Miles



Prepared for:
U.S. EPA Region 8



Contract No.:
EP-S8-13-01

TDD:
1606-19
TO:
0001

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Prepared By:
Weston Solutions, Inc.
START IV

Suite 100
1435 Garrison Street
Lakewood, CO 80215

FIGURE 1 SITE LOCATIONS MAP TATOOINE INDUSTRIES BURNS, WYOMING

Date: 10/18/2016



Legend	
Glass	Electronics, Glass, and Misc. Piles
● Glass Pile ~80 coated	— Glass Pile mostly non-coated
	— Glass Pile - 40% coated
	— Misc electronic parts no TVs
	— TV and misc electronics ~30% coated
	— TV and misc pile 40% coated
	— TV pile 90% coated

Prepared for:
U.S. EPA Region 8

Contract No.:
EP-S8-13-01

TDD:
1606-19

TO:
0001

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Lakewood, CO 80215

**FIGURE 2
SITE FEATURES MAP
TATOOINE INDUSTRIES
BURNS, WYOMING**

Date: 10/27/2016



EPA REGION 8 QA DOCUMENT REVIEW CROSSWALK

QAPP/FSP/SAP for: (check appropriate box)		Removal Program	Regulatory Authority and/or Funding Mechanism		40 CFR 31 for Grants																				
	GRANTEE	Region 8 START Contractor		X	48 CFR Part 46 for Contracts																				
X	CONTRACTOR				Interagency Agreement																				
	EPA				EPA Administrative Order																				
	Other				EPA Program Funding																				
					EPA Program Regulation																				
Document Title		Sampling and Analysis Plan for Tatooine Industries RS			EPA CIO 2105																				
QAPP/FSP/SAP Preparer		Eric Sandusky																							
Period of Performance (of QAPP/FSP/SAP)		1 year from date of EPA approval of Task Level QAPP (Last QAPP Revision Feb 2015)	Date Submitted for Review		10/4/2016																				
EPA Project Officer		Joyce Ackerman	PO Phone #		303-312-6822																				
EPA Project Manager		Joyce Ackerman	PM Phone #		303-312-6822																				
QA Program Reviewer or Approving Official		Joyce Ackerman	Date of Review																						
Documents to Review: 1. QAPP written by Grantee or EPA must also include for review: Work Plan(WP) / Statement of Work (SOW) / Program Plan (PP) / Research Proposal (RP) 2. QAPP written by Contractor must also include for review: a) Copy of signed QARF for Task Order b) Copy of Task Order SOW c) Made available hard or electronic copy of approved QMP d) If QMP not approved, provide Contract SOW 3. For a Field Sampling Plan (FSP) or Sampling & Analyses Plan (SAP), the Project QAPP must also be provided. <u>OR</u> The FSP or SAP must be clearly identified as a stand-alone QA document and must contain all QAPP required elements (Project Management, Data Generation/Acquisition, Assessment and Oversight, and Data Validation and Usability).			Documents Submitted for QAPP Review: 1. QA Document(s) submitted for review: <table border="1"> <thead> <tr> <th>QA Document</th> <th>Document Date</th> <th>Document Stand-alone</th> <th>Document with QAPP</th> </tr> </thead> <tbody> <tr> <td>QAPP</td> <td>Original: 7/2013 Rev. 2/2015</td> <td>No</td> <td></td> </tr> <tr> <td>FSP</td> <td>NA</td> <td>Yes / No</td> <td>Yes / No</td> </tr> <tr> <td>SAP</td> <td>10/4/2016</td> <td>No</td> <td>Yes</td> </tr> <tr> <td>SOP(s)</td> <td>NA</td> <td>Yes / No</td> <td>Yes / No</td> </tr> </tbody> </table>			QA Document	Document Date	Document Stand-alone	Document with QAPP	QAPP	Original: 7/2013 Rev. 2/2015	No		FSP	NA	Yes / No	Yes / No	SAP	10/4/2016	No	Yes	SOP(s)	NA	Yes / No	Yes / No
QA Document	Document Date	Document Stand-alone	Document with QAPP																						
QAPP	Original: 7/2013 Rev. 2/2015	No																							
FSP	NA	Yes / No	Yes / No																						
SAP	10/4/2016	No	Yes																						
SOP(s)	NA	Yes / No	Yes / No																						
			2. WP/SOW/TO/PP/RP Date _____ WP/SOW/TO/PP Performance Period _____ 3. QA document consistent with the: WP/SOW/PP for grants? <u>Yes / No</u> SOW/TO for contracts? <u>Yes / No</u> 4. QARF signed by R8 QAM <u>Yes / No / NA</u> Funding Mechanism <u>IA / contract / grant / NA</u> Amount _____																						
Summary of Comments (highlight significant concerns/issues): 1. Comment #1 - 2. Comment #2 - 3. Comment #3 - 4. Comment #4																									

Element	Acceptable	Location	Comments
	Yes/No/NA		
A. Project Management			
A1. Title and Approval Sheet			
a. Contains project title	Yes	SAP Title Page and Introduction SAP Worksheet 1 & 2	
b. Date and revision number line (for when needed)	Yes	SAP Revision Log	
c. Indicates organizations name	Yes	SAP Title Page	
d. Date and signature line for organizations project manager	Yes	SAP Worksheets 1 & 2 QAPP Worksheets 1,2,4,7 & 8	
e. Date and signature line for organizations QA manager	Yes	QAPP Worksheets 1 & 2	
f. Other date and signatures lines, as needed	Yes	SAP Worksheets 1 & 2 QAPP Worksheets 4,7 & 8	
A2. Table of Contents			
a. Lists QA Project Plan information sections	Yes	SAP Table of Contents, SAP List of Appendices	
b. Document control information indicated	Yes	SAP Title Page and Worksheet 1 & 2 QAPP Worksheet 1 & 2	
A3. Distribution List			
Includes all individuals who are to receive a copy of the QA Project Plan and identifies their organization		SAP Introduction QAPP Worksheet 3 & 5	
A4. Project/Task Organization			
a. Identifies key individuals involved in all major aspects of the project, including contractors		QAPP Worksheet 3 & 5	
b. Discusses their responsibilities	Yes	QAPP Worksheet 4, 7 & 8	
c. Project QA Manager position indicates independence from unit generating data	Yes	QAPP Worksheet 3 & 5	
d. Identifies individual responsible for maintaining the official, approved QA Project Plan	Yes	SAP Introduction QAPP Worksheet 4, 7 & 8	
e. Organizational chart shows lines of authority and reporting responsibilities	Yes	QAPP Worksheet 3 & 5	
A5. Problem Definition/Background			
a. States decision(s) to be made, actions to be taken, or outcomes expected from the information to be obtained		SAP Worksheet 9, 11, QAPP Worksheet 9	
b. Clearly explains the reason (site background or historical context) for initiating this project	Yes	SAP Worksheet 10	
c. Identifies regulatory information, applicable criteria, action limits, etc. necessary to the project	Yes	SAP Worksheets 10, 11, 15	
A6. Project/Task Description			
a. Summarizes work to be performed, for example, measurements to be made, data files to be obtained, etc., that support the projects goals		SAP Worksheet 14 & 16, SAP Worksheet 17	

Element	Acceptable	Location	Comments
	Yes/No/NA		
b. Provides work schedule indicating critical project points, e.g., start and completion dates for activities such as sampling, analysis, data or file reviews, and assessments		SAP Worksheet 14 & 16	
c. Details geographical locations to be studied, including maps where possible		SAP Worksheets 10, 11	
d. Discusses resource and time constraints, if applicable	Yes		
A7. Quality Objectives and Criteria			
a. Identifies - performance/measurement criteria for all information to be collected and acceptance criteria for information obtained from previous studies. - including project action limits and laboratory detection limits and - range of anticipated concentrations of each parameter of interest	Yes	SAP Worksheet 15 QAPP Worksheet 13 QAPP Worksheets 12.1 - 12.4	
b. Discusses precision	Yes	QAPP Worksheet 37	
c. Addresses bias	Yes		
d. Discusses representativeness	Yes		
e. Identifies the need for completeness	Yes		
f. Describes the need for comparability	Yes		
g. Discusses desired method sensitivity	Yes		
A8. Special Training/Certifications			
a. Identifies any project personnel specialized training or certifications	Yes	QAPP Worksheet 4, 7 & 8	
b. Discusses how this training will be provided	Yes		
c. Indicates personnel responsible for assuring training/certifications are satisfied	Yes		
d. identifies where this information is documented	Yes		
A9. Documentation and Records			
a. Identifies report format and summarizes all data report package information	Yes	SAP Worksheets 14 & 16 QAPP Worksheet 29	
b. Lists all other project documents, records, and electronic files that will be produced	Yes	SAP Worksheet 14 & 16	


Element	Acceptable	Location	Comments
	Yes/No/NA		
c. Identifies where project information should be kept and for how long	Yes	QAPP Worksheet 29	
d. Discusses back up plans for records stored electronically	Yes	QAPP Worksheet 29	
e. States how individuals identified in A3 will receive the most current copy of the approved QA Project Plan, identifying the individual responsible for this	Yes	SAP Introduction QAPP Worksheet 4 & 5	
B. Data Generation/Acquisition			
B1. Sampling Process Design (Experimental Design)			
a. Describes and justifies design strategy, indicating size of the area, volume, or time period to be represented by a sample	Yes	SAP Worksheet 11, 17	
b. Details the type and total number of sample types/matrix or test runs/trials expected and needed	Yes	SAP Worksheets 11, 17, 18	
c. Indicates where samples should be taken, how sites will be identified/located	Yes		
d. Discusses what to do if sampling sites become inaccessible	Yes	SAP Worksheet 17	
e. Identifies project activity schedules such as each sampling event, times samples should be sent to the laboratory, etc.	Yes		
f. Specifies what information is critical and what is for informational purposes only	Yes		
g. Identifies sources of variability and how this variability should be reconciled with project information	Yes		
B2. Sampling Methods			
a. Identifies all sampling SOPs by number, date, and regulatory citation, indicating sampling options or modifications to be taken	Yes	QAPP Worksheet 21	
b. Indicates how each sample/matrix type should be collected	Yes	SAP Worksheet 17 QAPP Worksheet 19 & 30	
c. If in situ monitoring, indicates how instruments should be deployed and operated to avoid contamination and ensure maintenance of proper data	Yes	QAPP Worksheet 22	
d. If continuous monitoring, indicates averaging time and how instruments should store and maintain raw data, or data averages	Yes	SAP Worksheet 11, QAPP Worksheet 22	
e. Indicates how samples are to be homogenized, composited, split, or filtered, if needed	Yes	SAP Worksheet 17	
f. Indicates what sample containers and sample volumes should be used	Yes	SAP Worksheet 17, SAP Table 1 QAPP Worksheet 19 & 30	

Element	Acceptable	Location	Comments
	Yes/No/NA		
g. Identifies whether samples should be preserved and indicates methods that should be followed	Yes	SAP Worksheet 17, SAP Table 1 QAPP Worksheet 19 & 30	
h. Indicates whether sampling equipment and samplers should be cleaned and/or decontaminated, identifying how this should be done and by-products disposed of	Yes	QAPP Worksheet 21	
i. Identifies any equipment and support facilities needed	Yes	QAPP Worksheet 22	
j. Addresses actions to be taken when problems occur, identifying individual(s) responsible for corrective action and how this should be documented	Yes	SAP Worksheet 17 QAPP Worksheet 31, 32 & 33	
B3. Sample Handling and Custody			
a. States maximum holding times allowed from sample collection to extraction and/or analysis for each sample type and, for in-situ or continuous monitoring, the maximum time before retrieval of information	Yes	QAPP Worksheet 19 & 30	
b. Identifies how samples or information should be physically handled, transported, and then received and held in the laboratory or office (including temperature upon receipt)	Yes	SAP Worksheet 26 & 27	
c. Indicates how sample or information handling and custody information should be documented, such as in field notebooks and forms, identifying individual responsible	Yes	SAP Worksheets 17, 26 & 27	
d. Discusses system for identifying samples, for example, numbering system, sample tags and labels, and attaches forms to the plan	Yes	SAP Worksheet 11, 17, 18, 26 & 27	
e. Identifies chain-of-custody procedures and includes form to track custody	Yes		
B4. Analytical Methods			
a. Identifies all analytical SOPs (field, laboratory and/or office) that should be followed by number, date, and regulatory citation, indicating options or modifications to be taken, such as sub-sampling and extraction procedures	Yes	QAPP Worksheet 23	
b. Identifies equipment or instrumentation needed	Yes	SAP Attachment C: QAPP Worksheets 23, 24	
c. Specifies any specific method performance criteria	Yes	QAPP Worksheet 22, 24	
d. Identifies procedures to follow when failures occur, identifying individual responsible for corrective action and appropriate documentation	Yes		
e. Identifies sample disposal procedures	Yes	SAP Worksheet 26 & 27 QAPP Appendix I	
f. Specifies laboratory turnaround times needed	Yes	QAPP Worksheet 19 & 30	

Element	Acceptable	Location	Comments
	Yes/No/NA		
g. Provides method validation information and SOPs for nonstandard methods	Yes	QAPP Worksheets 23, 25 & 28	
B5. Quality Control			
a. For each type of sampling, analysis, or measurement technique, identifies QC activities which should be used, for example, blanks, spikes, duplicates, etc., and at what frequency		SAP Worksheet 20	
b. Details what should be done when control limits are exceeded, and how effectiveness of control actions will be determined and documented	Yes	SAP Worksheets 26 & 27, QAPP Worksheet 25 & 28	
c. Identifies procedures and formulas for calculating applicable QC statistics, for example, for precision, bias, outliers and missing data	Yes	QAPP Worksheet 37	
B6. Instrument/Equipment Testing, Inspection, and Maintenance			
a. Identifies field and laboratory equipment needing periodic maintenance, and the schedule for this	Yes	QAPP Worksheets 22, 24, and 25	
b. Identifies testing criteria	Yes		
c. Notes availability and location of spare parts	Yes		
d. Indicates procedures in place for inspecting equipment before usage	Yes	QAPP Worksheets 22, 24, and 25	
e. Identifies individual(s) responsible for testing, inspection and maintenance	Yes		
f. Indicates how deficiencies found should be resolved, re-inspections performed, and effectiveness of corrective action determined and documented	Yes	QAPP Worksheets 22, 24	
B7. Instrument/Equipment Calibration and Frequency			
a. Identifies equipment, tools, and instruments that should be calibrated and the frequency for this calibration	Yes	QAPP Worksheets 22 and 24	
b. Describes how calibrations should be performed and documented, indicating test criteria and standards or certified equipment	Yes	QAPP Worksheet 22, SAP Worksheet 26 & 27	
c. Identifies how deficiencies should be resolved and documented	Yes		
B8. Inspection/Acceptance for Supplies and Consumables			
a. Identifies critical supplies and consumables for field and laboratory, noting supply source, acceptance criteria, and procedures for tracking, storing and retrieving these materials	Yes	SAP Attachment B, SAP Worksheet 26 & 27 QAPP Worksheet 22.	
b. Identifies the individual(s) responsible for this	Yes		
B9. Use of Existing Data (Non-direct Measurements)			
a. Identifies data sources, for example, computer databases or literature files, or models that should be accessed and used	Yes	SAP Worksheet 11 QAPP Worksheet 13	

Element	Acceptable	Location	Comments
	Yes/No/NA		
b. Describes the intended use of this information and the rationale for their selection, i.e., its relevance to project	Yes	SAP Worksheet 11 QAPP Worksheet 13	
c. Indicates the acceptance criteria for these data sources and/or models	Yes		
d. Identifies key resources/support facilities needed	Yes		
e. Describes how limits to validity and operating conditions should be determined, for example, internal checks of the program and Beta testing	Yes	SAP Worksheet 11 QAPP Worksheet 13	
B10. Data Management			
a. Describes data management scheme from field to final use and storage	Yes	SAP Worksheet 17. SAP Worksheets 26 & 27, QAPP Worksheets 29 & 35	
b. Discusses standard record-keeping and tracking practices, and the document control system or cites other written documentation such as SOPs	Yes	SAP Worksheets 26 & 27 QAPP Worksheet 29	
c. Identifies data handling equipment/procedures that should be used to process, compile, analyze, and transmit data reliably and accurately	Yes	QAPP Worksheets 22, 23, and 29	
d. Identifies individual(s) responsible for this	Yes	QAPP Worksheet 29	
e. Describes the process for data archival and retrieval	Yes		
f. Describes procedures to demonstrate acceptability of hardware and software configurations	Yes	QAPP Worksheets 22 and 23	
g. Attaches checklists and forms that should be used	Yes	SAP Worksheet 17 Attachment A and Attachment B	
C. Assessment and Oversight			
C1. Assessments and Response Actions			
a. Lists the number, frequency, and type of assessment activities that should be conducted, with the approximate dates	Yes	QAPP Worksheet 31, 32 & 33	
b. Identifies individual(s) responsible for conducting assessments, indicating their authority to issue stop work orders, and any other possible participants in the assessment process	Yes		
c. Describes how and to whom assessment information should be reported	Yes		
d. Identifies how corrective actions should be addressed and by whom, and how they should be verified and documented	Yes	QAPP Worksheet 31, 32 & 33	
C2. Reports to Management			

Element	Acceptable	Location	Comments
	Yes/No/NA		
a. Identifies what project QA status reports are needed and how frequently	Yes	QAPP Worksheet 31, 32 & 33	
b. Identifies who should write these reports and who should receive this information	Yes	QAPP Worksheet 31, 32 & 33	
D. Data Validation and Usability			
D1. Data Review, Verification, and Validation			
Describes criteria that should be used for accepting, rejecting, or qualifying project data	Yes	SAP Worksheet 36	
D2. Verification and Validation Methods			
a. Describes process for data verification and validation, providing SOPs and indicating what data validation software should be used, if any	Yes	QAPP Worksheets 34, 35, 36	
b. Identifies who is responsible for verifying and validating different components of the project data/information, for example, chain-of-custody forms, receipt logs, calibration information, etc.	Yes	QAPP Worksheet 35	
c. Identifies issue resolution process, and method and individual responsible for conveying these results to data users	Yes	QAPP Worksheets 35 SAP Worksheet 36	
d. Attaches checklists, forms, and calculations	Yes	QAPP Worksheet 34, 37 QAPP Appendix O, P, Q, R	
D3. Reconciliation with User Requirements			
a. Describes procedures to evaluate the uncertainty of the validated data	Yes	QAPP Worksheets 12, 37 QAPP Appendix J	
b. Describes how limitations on data use should be reported to the data users	Yes	QAPP Worksheet 37	
D3. Reconciliation with User Requirements			
a. Describes procedures to evaluate the uncertainty of the validated data	Yes	SAP Worksheets 11 QAPP Worksheets 12, 35, 36	
b. Describes how limitations on data use should be reported to the data users	Yes	QAPP Worksheet 12	

	This SSDMP is intended to ensure data integrity and consistency by providing guidance for data collection by field personnel and subsequent data management activities. This document is intended to be used in conjunction with the Regional Data Management Plan (RDMP) and includes the details specific to this site or incident.	Site-Specific Data Management Plan (SSDMP)			
		Site Name:	Tatooine Industries RS	Site ID:	0001/1606-19
		OSC:	Joyce Ackerman	Date Initiated:	6/24/2016
		Data Manager:	Eric Sandusky	Last Updated:	6/24/2016

SECTION 1: TASKING

The following documents the data streams and data management tasks will be supported at the site (X all that apply).

Documents and Images

X	Data Stream	Repository	Reporting Requirements
X	Field Forms	EPAOSC.net	Upload electronic files and metadata to repository and generate a log of files in the repository.
X	Construction Documents		
X	Reports		
X	Site Photos		
X	Project Costs	RCMS	Generate Reports and submit to OSC electronically.

Analytical

X	Data Stream	Repository	Reporting Requirements
X	Sampling Data	Scribe.net	Publish data to repository and generate data summary tables and figures for Final Report.
X	Lab Results		
X	Validation Qualifiers		
	XRF Results		

Monitoring

X	Data Stream	Repository	Reporting Requirements
	Field Monitoring	Scribe.net	Publish data to repository and generate data summary tables and figures for Final Report.
	Viper Monitoring	Viper.net	
	Reconnaissance	ERT Cloud	
X	GPS Data	GIS Software	Publish data to feature classes, figures, reports, and viewers.

Other

X	Task	Documents/Images	Analytical	Monitoring
	Use the following data streams to deploy a site-specific spatial data viewer:	X	X	X
	Manage the following data streams collected by other agencies, contractors or PRPs:			
	Site Photos	X		
	Site Documents	X		

SECTION 2: DATA MANAGEMENT PRACTICES

The following table outlines the specific requirements for various data types being collected during the project.

Data Stream ¹	Data Source ²	Site Specific Procedure (Y/N) ³				
		Collection	Processing	Storage	Verification	Reporting
Site Documentation	U.S. EPA, START	N	N	N	N	N
Site Photos	START GPS enabled camera	N	N	N	N	N
Project Costs	RCMS Report	N	N	N	N	N
Sampling Data	Logbook, HAZcat sheets	N	N	N	N	N
Lab Results	Lab EDD	N	N	N	N	N
Validation Qualifiers	START validation	N	N	N	N	N
Reconnaissance	GPS enabled camera, Logbook	N	N	N	N	N
GPS	GPS enabled camera, Trimble GPS unit	N	N	N	N	N

1: Category of data to be managed at the site. Must match data stream(s) selected in Section 1. Create one line per category AND source.

2: List the equipment or data file that serves as the source of the data (i.e. TVA 1000, camera, iPad, Trimble GPS, lab EDD). If secondary data, include the organization who is providing the data.

3: Y – indicates a site specific procedure is employed and an Appendix and/or Section 3 has been included to document the details, N – indicates data management follows procedures outlined in the RDMP.

SECTION 3: SITE-SPECIFIC DATA ELEMENTS

The following table documents deviations from the data standards identified in the RDMP.

Data Element	Required	Description	Format	Repository Table.Field	Valid Values*
SiteNo	Yes	TDD Number for projects already assigned a TDD; R8mmddyy (date of project start) for emergency responses	Text(12)	Site_Site_No	0001160619
EventID	Yes	User-defined partition for data that makes site-specific sense. Must be unique within a Site. RA - Removal Assessment, RV - Removal #### Incremental number starting at 0001	Text(50)	Events_EventID	RA####
Location	Yes	Identifier for a geographic point where samples or monitoring results are collected. Must be unique within a Site.	Text(30)	Location_Location	TI##
SampleID	Yes	Identifier for a sample that is collected. Must be unique within a Site	Text(25)	Samples_Samp_No	TI-GL-## TI-## GL-01 = Glass pile 1 TI-08 = Hazclass drum number
Analysis	Yes	Lab Analysis	Text(100)	Results_Analysis	Pb, VOCs